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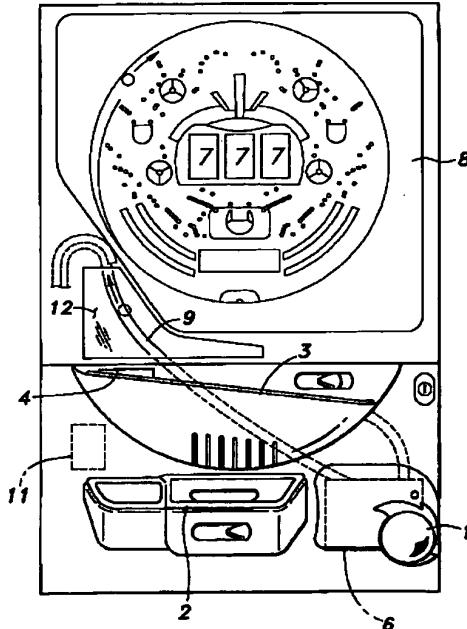
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(54)【発明の名称】 遊戯装置

(57)【要約】

【課題】 実際の球を盤上に弾く弾球遊戯装置と同様な感覚を遊戯者に与えることができ、かつメンテナンスが容易な遊戯装置を提供する。

【解決手段】 パチンコ台の盤を模した画像及び該盤上の球の動き等を静止画及び動画により画面に表示し、パチンコ台と同様な遊戯を行う遊戯装置に於いて、弾球の強度を調節するための手元のハンドルと、実際に球を弾く弾球装置と、弾かれた球を誘導してその後貯球装置に戻すための通路と、弾かれた球の速度または弾く際の衝撃力を検出するためのセンサと、弾かれた球を所定の位置にて遊戯者に視認させるための窓とを有し、遊戯者が実際に前記ハンドルを操作して弾いた球の実際の動きを窓にて確認させ、これに同期して画面上にその動作を動画表示することで、実際のパチンコ台と同様に弾球時にハンドルに発生する触感、球の走る音などを遊戯者が感じることができ、即ち臨場感が得られることから、より現実味が増し、操作感が向上する。



【特許請求の範囲】

【請求項1】 多数の釘及び入賞孔が設けられた盤内に向けて遊技者が手元の球を弾き、その球が入賞孔に入ると所定の数の賞球を得、または抽選等により当否が判定され、入賞率が変化する弾球遊技装置に模して前記盤及び該盤上の球の動き等を静止画及び動画により画面に表示し、前記弾球遊技装置と同様な遊技を行う遊技装置であって、

弾球の強度を調節するための手元のハンドルと、

実際に球を弾き、その衝撃を前記ハンドルに伝える弾球装置と、

前記弾球装置により弾かれた球の速度または弾く際の衝撃力を検出するためのセンサと、

前記弾球装置により弾かれた球を所定の位置にて前記画面上に表示された盤に向かう方向に誘導し、その後貯球装置に戻すための通路と、

前記センサの検出値に応じて前記弾かれた球の挙動を演算すると共に前記画面上に前記弾かれた球と同期した動作を表示する制御装置と、

前記所定の位置にて前記弾かれた球が誘導されるのを遊技者に視認させるための窓とを有し、

遊技者が実際に前記ハンドルを操作して弾いた球の実際の動きを前記窓にて確認し得ると共にこれに同期して前記画面上にその動作を動画表示するようになっていることを特徴とする遊技装置。

【請求項2】 前記画面上にて球が入賞したらそれに応じた実際の賞球が、遊技者に戻されるようになっていることを特徴とする請求項1に記載の遊技装置。

【発明の詳細な説明】

【0001】

【発明の属する技術分野】 本発明は、多数の釘及び入賞孔が設けられた盤内に向けて遊技者が手元の球を弾き、その球が入賞孔に入ると所定の数の賞球を得、または抽選等により当否が判定され、入賞率が変化する弾球遊技装置に模して前記盤及び該盤上の球の動き等を静止画及び動画により画面に表示し、前記弾球遊技装置と同様な遊技を行う遊技装置に関するものである。

【0002】

【従来の技術】 従来から、多数の釘及び入賞孔が設けられた盤内に向けて遊技者が手元の球を弾き、その球が入賞孔に入ると所定の数の賞球を得、または抽選等により当否が判定され、入賞率が変化する弾球遊技装置、所謂バシンコ台に模して前記盤及び該盤上の球の動き等を静止画及び動画により画面に表示し、前記弾球遊技装置と同様な遊技を行う遊技装置が例えば特開昭56-34377号公報や特開平6-254215号公報等に提案されている。この形式の遊技装置によれば、遊技台を取り替えなくてもプログラムの変更のみで盤のレイアウト、入賞時などのイベントの変更ができるばかりでなく、釘調整を必要とせずに入賞率の調節も可能となることか

ら、遊技台のメンテナンスが容易になり、コストも低廉になるという利点がある。

【0003】

【発明が解決しようとする課題】 しかしながら、上記したような遊技装置にあっては、実際に弾球は行わず、ハンドルにより弾球強度を入力、またはボタンスイッチにより段階的に弾球強度を入力してこれを画面に表示される球の動作に反映させるようしていることから、遊技者が弾球時にハンドルに発生する触感、球の走る音などを感じることができず、即ち臨場感が得られず、現実味のないものとなっていた。

【0004】 また、ハンドルに弾球のタイミングに同期して振動を発生させることも考えられるが、球の走る音などがなく、弾球時にハンドルに発生する触感も実際のものとは異なり必ずしも所望の現実味が得られない。

【0005】 本発明は、上記したような従来技術の問題点を解決するべく案出されたものであり、触覚的、聴覚的、視覚的に実際の球を盤上に弾く弾球遊技装置と同様な感覚を遊技者に与えることができ、かつ上記弾球遊技装置よりもメンテナンスが容易な遊技装置を提供することを目的とする。

【0006】

【課題を解決するための手段】 上記した目的は、本発明によれば、多数の釘及び入賞孔が設けられた盤内に向けて遊技者が手元の球を弾き、その球が入賞孔に入ると所定の数の賞球を得、または抽選等により当否が判定され、入賞率が変化する弾球遊技装置に模して前記盤及び該盤上の球の動き等を静止画及び動画により画面に表示し、前記弾球遊技装置と同様な遊技を行う遊技装置であ

って、弾球の強度を調節するための手元のハンドルと、実際に球を弾き、その衝撃を前記ハンドルに伝える弾球装置と、前記弾球装置により弾かれた球の速度または弾く際の衝撃力を検出するためのセンサと、前記弾球装置により弾かれた球を所定の位置にて前記画面上に表示された盤に向かう方向に誘導し、その後貯球装置に戻すための通路と、前記センサの検出値に応じて前記弾かれた球の挙動を演算すると共に前記画面上に前記弾かれた球と同期した動作を表示する制御装置と、前記所定の位置にて前記弾かれた球が誘導されるのを遊技者に視認させるための窓とを有し、遊技者が実際に前記ハンドルを操作して弾いた球の実際の動きを前記窓にて確認し得ると共にこれに同期して前記画面上にその動作を動画表示するようになっていることを特徴とする遊技装置を提供することにより達成される。特に、前記画面上にて球が入賞したらそれに応じた実際の賞球が、遊技者に戻されるようになっていると良い。

【0007】

【発明の実施の形態】 以下に、本発明の好適な実施形態について説明する。

50 【0008】 図1は、本発明が適用された遊技装置の部

分断面正面図であり、図2はその要部拡大図である。本装置は従来の弾球遊技装置（パチンコ台）と略同様な大きさであり、正面下部右側に弾球の開始／停止及び強度を調節するためのハンドル1が取り付けられている。また、ハンドル1の左側には賞球を受ける下皿2、その上部には上皿3が設けられている。上皿3には、装置側から該上皿3に球を入れるための賞球口4が開口し、かつこの上皿3は弾球装置6に球を供給するべく接続されている。

【0009】上皿3の上部には、液晶ディスプレイまたはプラズマディスプレイなどの所謂フラットディスプレイ装置8が設けられている。

【0010】弾球装置6及びその周辺構造を簡略に表す図2に示すように、弾球装置6により弾かれた球を途中まで後記するフラットディスプレイ装置8の画面上に表示された盤に向かう方向に誘導し、その後図示されない貯球装置に戻すための通路9が設けられ、その途中には、弾球装置6により弾かれた球の速度を検出するための速度センサ10が設けられている。速度センサ10としては、例えば2点間の通過時間を検出するもの、超音波の反射を利用するものなどがある。この速度センサ10及び上記フラットディスプレイ装置8は制御装置11に接続されている。この制御装置11は、図示されない入出力装置から入力されたプログラムに基づいてフラットディスプレイ装置8上に入賞孔、釘、中央動画表示などを行うと共に弾球装置6により弾かれた球に同期した球の動画を表示し、球の入賞／はずれ及び入賞した場合の抽選等をも行うようになっている。

【0011】また、フラットディスプレイ装置8左下部には、通路9の中間部を臨む窓12が設けられ、弾球装置6により弾かれた球を視認し得るようになっている。

【0012】以下に、上記遊技装置の遊技方法及び作動要領について説明する。まず、遊技者は、上皿3に図示されない球貸出装置から球を供給し、ハンドル1を操作して弾球装置6により球を弾く。すると、弾かれた球は通路9を通り、窓12にて遊技者に確認させた後、図示されない貯球装置に戻される。このとき、速度センサ10により球が通過したこと及び球の速度が検出され、球が窓12を通過した後、これに同期してそのままフラットディスプレイ装置8上に表示された盤に球が入ったかの如く球の動画表示を行う。そして、その速度等に対応した挙動を示すように確率的な演算を行い、その球の入賞／はずれを決定し、更に入賞した場合の大当たりの抽

選等を行う。そして、入賞に応じた球を賞球口4から上皿3に出すようになる。

【0013】尚、上記構成では弾球装置6により弾かれた球の速度を速度センサ10により検出し、その後の挙動を求めたが、弾球装置6に圧力センサなどを設けて球に加えられる衝撃力を検出してその後の挙動を求めて良い。また、弾かれた球を視認するための窓も盤の上部まで設けるなど、その設定位置、大きさなどは任意に変更可能である。

【0014】

【発明の効果】上記した説明により明らかなように、本発明による遊技装置によれば、パチンコ台の盤を模した画像及び該盤上の球の動き等を静止画及び動画により画面上に表示し、パチンコ台と同様な遊技を行う遊技装置に於いて、弾球の強度を調節するための手元のハンドルと、実際に球を弾く弾球装置と、弾かれた球を誘導してその後貯球装置に戻すための通路と、弾かれた球の速度または弾く際の衝撃力を検出するためのセンサと、弾かれた球を所定の位置にて遊技者に視認させるための窓と

20 を有し、遊技者が実際に前記ハンドルを操作して弾いた球の実際の動きを窓にて確認させ、これに同期して画面上にその動作を動画表示することで、実際のパチンコ台と同様に弾球時にハンドルに発生する触感、球の走る音などを遊技者が感じることができ、即ち臨場感が得られることから、より現実味が増し、操作感が向上するため、遊技者の興味をそそる。特に画面上にて球が入賞したらそれに応じた実際の賞球が、遊技者に戻されるようになっていると、単にカウントするよりも一層臨場感が高まる。

30 【図面の簡単な説明】

【図1】本発明が適用された遊技装置の正面図。

【図2】図1の要部を拡大した部分断面図。

【符号の説明】

- 1 ハンドル
- 2 下皿
- 3 上皿
- 4 賞球口
- 6 弾球装置
- 8 フラットディスプレイ装置

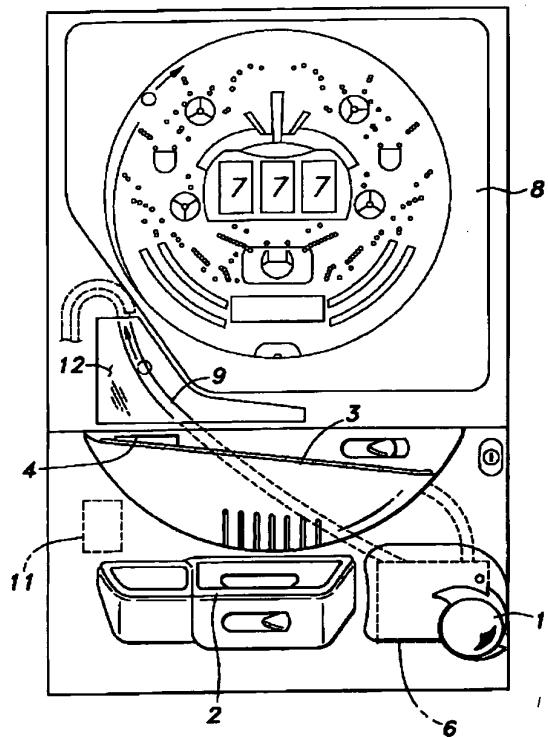
40 9 通路

10 速度センサ

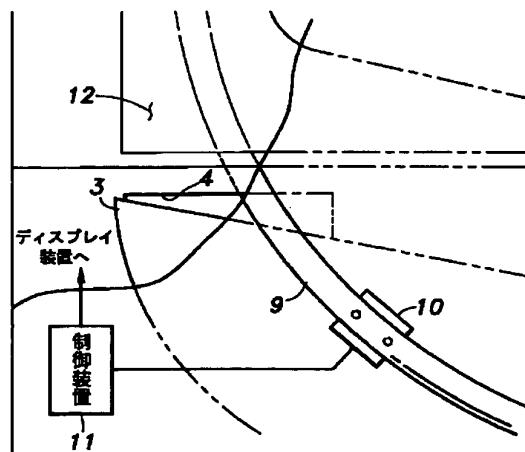
11 制御装置

12 窓

【図1】



【図2】



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Bibliography

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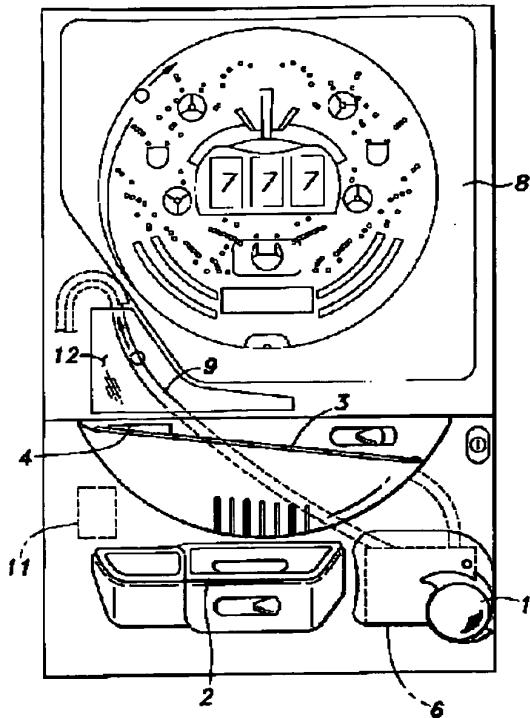
Summary

(57) [Abstract]

[Technical problem] The same feeling as the **** game equipment which flips an actual sphere on the board can be given to a game person, and a maintenance offers easy game equipment.

[Means for Solution] They are a still picture and an animation about the movement of the sphere on the picture which imitated the board of a pachinko base, and this board etc. The handle of the hand for adjusting the intensity of **** in the game equipment which displays on a screen and performs the same game as a pachinko base, The **** equipment which actually flips a sphere, and the path for guiding the flipped sphere and returning to **** equipment after that, The sensor for detecting the speed of the flipped sphere, or the impulse force at the time of flipping, By having an aperture for making a game person check the flipped sphere by looking in a position, and a game person making the actual movement of the sphere which actually operated and flipped the aforementioned handle check by the aperture, and displaying the animation of the operation on a screen synchronizing with this The increase of a touch of reality and a feeling of operation improve more from a game person being able to sense tactile feeling generated for a handle, the sound which a sphere runs being the same as that of an actual pachinko base at the time of ****, namely, presence being obtained.

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CLAIMS

[Claim(s)]

[Claim 1] Game equipment which is equipped with the following and characterized by displaying the animation of the operation on the aforementioned screen synchronizing with this while a game person can check the actual movement of the sphere which actually operated and flipped the aforementioned handle by the aforementioned aperture. A game person flips a sphere at hand towards the inside of the board in which the hole was prepared. many nails and winning a prize — If it

goes into a hole, will obtain a predetermined number of awarded balls, or justice is judged by the lottery etc. the sphere -- winning a prize -- The handle of the hand for imitating to the **** game equipment from which the rate of winning a prize changes, displaying the movement of the sphere on the aforementioned board and this board etc. on a screen by the still picture and the animation, being the aforementioned **** game equipment and game equipment which performs the same game, and adjusting the intensity of **** **** equipment which actually flips a sphere and tells the shock to the aforementioned handle The sensor for detecting the speed of the sphere flipped by the aforementioned **** equipment, or the impulse force at the time of flipping The path for guiding the sphere flipped by the aforementioned **** equipment in the direction which goes to the board displayed on the aforementioned screen in the position, and returning it to **** equipment after that, The aperture for making a game person check by looking that the control unit which displays operation which synchronized with the sphere flipped the account of before on the aforementioned screen while calculating the behavior of the sphere flipped the account of before according to the detection value of the aforementioned sensor, and the sphere flipped the account of before in the aforementioned position are guided

[Claim 2] Game equipment according to claim 1 characterized by returning a game person the actual awarded balls according to it if a sphere wins a prize on the aforementioned screen.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[The technical field to which invention belongs] A game person flips a sphere at hand towards the inside of the board in which the hole was prepared. this invention -- many nails and winning a prize -- the sphere -- winning a prize -- if it goes into a

hole, a predetermined number of awarded balls will be obtained, or justice is judged by the lottery etc., it imitates to the **** game equipment from which the rate of winning a prize changes, the movement of the sphere on the aforementioned board and this board etc. is displayed on a screen by the still picture and the animation, and it is related with the aforementioned **** game equipment and the game equipment which performs the same game

[0002]

[Description of the Prior Art] A game person flips a sphere at hand towards the inside of the board in which the hole was prepared. the nail of the former to a large number, and winning a prize — If it goes into a hole, will obtain a predetermined number of awarded balls, or justice is judged by the lottery etc. the sphere — winning a prize — Imitate on the **** game equipment from which the rate of winning a prize changes, and the so-called pachinko base, and the movement of the sphere on the aforementioned board and this board etc. is displayed on a screen by the still picture and the animation. The aforementioned **** game equipment and the game equipment which performs the same game are proposed by JP,56-34377,A, JP,6-254215,A, etc. According to the game equipment of this form, even if it does not exchange a game base, it not only can perform change of the events at the time of the layout of the board, and winning a prize etc. only in change of a program, but without needing nail adjustment, the maintenance of a bird clapper to a game base becomes it easy that regulation of the rate of winning a prize is also possible, and cost has the advantage of becoming cheap.

[0003]

[Problem(s) to be Solved by the Invention] However, if it is in game equipment which was described above **** does not actually carry out, but input **** intensity by the handle, it inputs **** intensity gradually by the input or the button switch, and this from making it make it reflected in operation of the sphere displayed on a screen A game person could not sense tactile feeling generated for a handle, the sound which a sphere runs at the time of ****, presence was not obtained, but there had been no touch of reality.

[0004] Moreover, although also making a handle generate vibration synchronizing with the timing of **** is considered, there is no sound which a sphere runs and, unlike what also has actual tactile feeling generated for a handle at the time of ****, a desired touch of reality is not necessarily obtained.

[0005] this invention is thought out to solve the trouble of the conventional technology which was described above, and can give a game person the same feeling as the **** game equipment which flips an actual sphere on the board tactile, acoustic-sense-wise, and visually, and offers game equipment with a easier maintenance than the above-mentioned **** game equipment — it aims at things [0006]

[Means for Solving the Problem] A game person flips a sphere at hand towards the inside of the board in which the hole was prepared. according to this invention in the

above-mentioned purpose -- many nails and winning a prize -- If it goes into a hole, will obtain a predetermined number of awarded balls, or justice is judged by the lottery etc. the sphere -- winning a prize -- The handle of the hand for imitating to the **** game equipment from which the rate of winning a prize changes, displaying the movement of the sphere on the aforementioned board and this board etc. on a screen by the still picture and the animation, being the aforementioned **** game equipment and game equipment which performs the same game, and adjusting the intensity of ****, The sensor for detecting the speed of the sphere which actually flipped the sphere and was flipped by the **** equipment which tells the shock to the aforementioned handle, and the aforementioned **** equipment, or the impulse force at the time of flipping, The path for guiding the sphere flipped by the aforementioned **** equipment in the direction which goes to the board displayed on the aforementioned screen in the position, and returning it to **** equipment after that, While calculating the behavior of the sphere flipped the account of before according to the detection value of the aforementioned sensor, the account of before on the aforementioned screen The control unit which displays operation which synchronized with the flipped sphere, It has an aperture for making a game person check by looking that the sphere flipped the account of before in the aforementioned position is guided. While a game person can check the actual movement of the sphere which actually operated and flipped the aforementioned handle by the aforementioned aperture, it is attained by offering the game equipment characterized by displaying the animation of the operation on the aforementioned screen synchronizing with this. When a sphere wins a prize on the aforementioned screen especially, it is good to return a game person the actual awarded balls according to it.

[0007]

[Embodiments of the Invention] Below, the suitable operation form of this invention is explained.

[0008] Drawing 1 is the elevation partly in section of the game equipment with which this invention was applied, and drawing 2 is the important section enlarged view. This equipment is the same size as conventional **** game equipment (pachinko base) and abbreviation, and the handle 1 for adjusting a start / halt, and intensity of **** is attached in transverse-plane lower right-hand side. Moreover, the upper pan 3 is formed in the left-hand side of a handle 1 at the lower pan 2 which obtains awarded balls, and its upper part. The awarded-balls mouth 4 for putting a sphere into this upper pan 3 from an equipment side carries out opening to the upper pan 3, and the upper pan 3 of a parenthesis is connected to it to supply a sphere to **** equipment 6.

[0009] The so-called flat display units 8, such as a liquid crystal display or a plasma display, are formed in the upper part of the upper pan 3.

[0010] The path 9 for returning the sphere flipped by **** equipment 6 to the **** equipment which guides in the direction which goes to the board displayed on the

screen of the flat display unit 8 which carries out a postscript, and is not illustrated after that to the middle, as **** equipment 6 and its circumference structure are shown in drawing 2 expressed simple is formed, and the speed sensor 10 for detecting the speed of the sphere flipped by **** equipment 6 is formed in the middle. As a speed sensor 10, there are what detects the pass time for two points, for example, a thing using reflection of an ultrasonic wave, etc. This speed sensor 10 and the above-mentioned flat display unit 8 are connected to the control unit 11. the program as which this control unit 11 was inputted from the I/O device which is not illustrated -- being based -- the flat display unit 8 top -- winning a prize -- displaying the animation of the sphere which synchronized with the sphere flipped by **** equipment 6, while performing a hole, a nail, central animation display, etc., winning-a-prize/of a sphere performs the lottery at the time of shifting and winning a prize etc.

[0011] Moreover, the aperture 12 which faces the pars intermedia of a path 9 can be formed in the flat display unit 8 lower-left section, and the sphere flipped by **** equipment 6 can be checked by looking now.

[0012] Below, the game method of the above-mentioned game equipment and the operation point are explained. First, a game person supplies a sphere from the ball rental appearance equipment which is not illustrated by the upper pan 3, operates a handle 1, and flips a sphere with **** equipment 6. Then, after the flipped sphere passing along a path 9 and making a game person check it by the aperture 12, it is returned to the **** equipment which is not illustrated. The animation of a sphere is displayed as if the sphere went into the board displayed on the flat display unit 8 as it was synchronizing with this, after the speed of that the sphere passed by the speed sensor 10 and a sphere was detected at this time and the sphere passed the aperture 12. And a probable operation is performed so that the behavior corresponding to the speed etc. may be shown, and winning-a-prize/of the sphere determines a gap and performs the lottery of great success at the time of winning a prize further etc. And it comes to take out the sphere according to winning a prize from the awarded-balls mouth 4 to the upper pan 3.

[0013] In addition, although the speed sensor 10 detected the speed of the sphere flipped by **** equipment 6 and it asked for subsequent behavior with the above-mentioned composition, the impulse force which prepares a pressure sensor etc. in **** equipment 6, and is applied to a sphere may be detected, and you may ask for subsequent behavior. Moreover, also preparing the aperture for checking the flipped sphere by looking to the upper part of the board etc. can change the setting position, a size, etc. arbitrarily.

[0014]

[Effect of the Invention] By the above-mentioned explanation, according to the game equipment by this invention, so that clearly The handle of the hand for adjusting the intensity of **** in the game equipment which displays the movement of the sphere on the picture which imitated the board of a pachinko base, and this

board etc. on a screen by the still picture and the animation, and performs the same game as a pachinko base. The **** equipment which actually flips a sphere, and the path for guiding the flipped sphere and returning to **** equipment after that, The sensor for detecting the speed of the flipped sphere, or the impulse force at the time of flipping, By having an aperture for making a game person check the flipped sphere by looking in a position, and a game person making the actual movement of the sphere which actually operated and flipped the aforementioned handle check by the aperture, and displaying the animation of the operation on a screen synchronizing with this From a game person being able to sense tactile feeling generated for a handle, the sound which a sphere runs being the same as that of an actual pachinko base at the time of ****, namely, presence being obtained, since the increase of a touch of reality and a feeling of operation improve more, a game person's interest is excited. If a sphere wins a prize especially on a screen and the actual awarded balls according to it will be returned to a game person, presence will increase further rather than it only counts.

[Translation done.]

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] Front view of the game equipment with which this invention was applied.

[Drawing 2] The fragmentary sectional view which expanded the important section of drawing 1.

[Description of Notations]

- 1 Handle
- 2 Lower Pan
- 3 Upper Pan
- 4 Awarded-Balls Mouth
- 6 **** Equipment
- 8 Flat Display Unit

9 Path
10 Speed Sensor
11 Control Unit
12 Aperture

[Translation done.]

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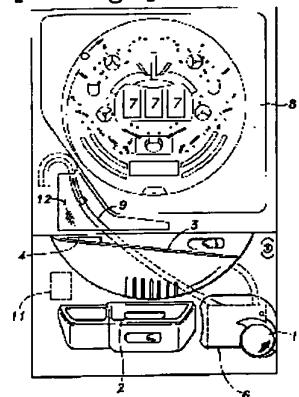
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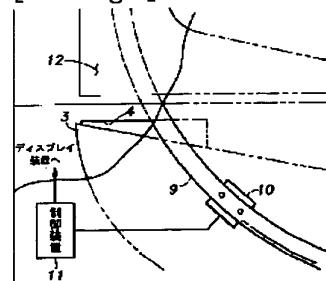
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DRAWINGS

[Drawing 1]



[Drawing 2]



[Translation done.]